REMARKS

Favorable reconsideration and allowance of the subject application are respectfully requested. Claims 1-9 are pending in the present application, with claims 1 and 9 being independent. Claim 9 has been added by this amendment, which does not add any new subject matter.

Specification/Drawings

The Examiner objected to the specification and requested that a drawing is provided under 37 C.F.R. 1.81. Applicant has amended the specification in an effort to place the specification into proper form for U.S. patent practice. Applicant has also provided a drawing as requested by the Examiner. Applicant respectfully submits that the Substitute Specification and the drawing do not add any new subject matter.

Accordingly, withdrawal of the objections to the specification and the drawing is respectfully requested.

Claim Objections

The Examiner objected to claims 2, 4, 5, and 6 because of minor informalities. Applicant has amended the claims in an effort to place them into proper form for U.S. patent practice.

Accordingly, withdrawal of the objection is respectfully requested.

Claim Rejections Under 35 U.S.C. §112

The Examiner rejected claims 4-6 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. This rejection is respectfully traversed.

Applicant has amended the claims in an effort to clarify the claims and to overcome the Examiner's rejection.

In addition, Applicant notes that "forgetting factor" is a weighting coefficient that defines how much "old data" and how much "new data" is used for calculating a new value for, for example, a tachometer gain factor or zero factor.

For example, when calculating the gain factor, the following formula can be utilized:

$$Gn = K*MGn + (1-K)*G_{n-1}$$

Wherein Gn is the nth tachometer gain factor (calculated); MGn is the nth measured tachometer gain factor (e.g., new measured sample); G_{n-1} is the previous tachometer gain factor (calculated); and K is the forgetting factor, which can have a value between 0 and 1, for example.

As such, for example, if K = 0.1, then 90 percent of the previous data is taken into account and 10 percent of the previous data is forgotten.

In other words, by expanding the calculation of G0, G1, etc. the following exponential formulas could be produced:

$$G0 = K*MG0 \text{ (initial)}$$

$G1 = K*MG1 + (1-K)*G0$

$G2 = K*MG2 + (1-k)*G1$

Then, via substitution, one can see that G2 would be $K*MG2 + (1-k)*K*MG1 + (1-K)^2*K*MG0$.

As can be seen in the above formulas, the older the measured value MGn is, the smaller its weighting coefficient (forgetting factor) becomes, i.e., the history will be slowly forgotten.

Accordingly, withdrawal of the rejection is respectfully requested.

Claim Rejections

The Examiner rejected: claims 1, 3, and 7 under 35 U.S.C. §102(b) as being anticipated by *Murakami* et al. (US 4,914,365); and claim 8 under 35 U.S.C. §103(a) as being unpatentable over *Murakami* et al. in view of *Hakala* et al. (WO 99/28229). These rejections are respectfully traversed insofar as they pertain to the presently pending claims.

Independent claim 1 is directed to a method for correcting speed feedback in a synchronous permanent-magnet motor. A speed value of the synchronous permanent-magnet motor is measured by a feedback sensor. Then, averages of a speed reference and a speed measurement are calculated for downward and upward constant-speed travel. Gain and zero factors are identified and the measured speed value is corrected to compensate for drift in the feedback sensor.

In rejecting independent claim 1, the Examiner alleges that Murakami et al. teaches all of the features of claim 1. Applicant respectfully submits that Murakami et al. fails to teach or suggest at least the feature of "correcting the measured speed value to compensate for drift in the feedback sensor," as recited in independent claim 1.

Murakami et al. is directed to a control device for servo motors that are used to drive industrial robots. More specifically, Murakami et al. provides a control device for a servo motor by which vibration of a mechanical system that is to be driven is restricted while the delay of the control response is made smaller. In other words, Murakami et al. describes a position control algorithm fro robot servomotors, in particular for vibration damping and dynami load compensation. Murakami et al., as stated above, does not even remotely teach or suggest that a drift of a feedback sensor is compensated. Thus, Murakami et al. does not anticipate at least independent claim 1.

Dependent claims 2-8 should be considered allowed at least for depending on an allowable base claims.

Accordingly, withdrawal of the rejection is respectfully requested.

New independent claim 9 should be considered allowable at least for similar reasons presented above for independent claim 1.

Conclusion

In view of the above amendments and remarks, this application appears to be in condition for allowance and the Examiner is, therefore, requested to reexamine the application and pass the claims to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Martin Geissler (Reg. 51,011) at telephone number (703) 205-8000, which is located in the Washington, DC area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
Michael K. Mutter, Reg.#29,680
P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

1381-0307P
MKM/MKG:tm

Attachment: Substitute Specification
Marked-up Version of the Original Specification
Formal Drawing (1)